

## PHYSICS 4A

Fall 2019

**Instructor:** Stephanie Dickson

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**Office hours:** Tuesdays and Thursdays 12:30 to 1:20 pm

**Final exam date:** Tuesday, December 10th, 1:45 to 3:45 p.m.

**Text:** Physics for Scientists and Engineers, 9th edition, by Serway and Jewett

**Prerequisites:** Completion of Math 1A and concurrent enrollment in Math 1B.

The goal of this course is to cover the three conservation laws of classical mechanics: energy, momentum, and angular momentum, along with oscillations. This includes the necessary details to successfully manipulate those laws: kinematics, vectors, problem solving techniques, mathematical techniques, and various definitions including Newton's universal law of gravitation.

There will be weekly quizzes based on the homework. In addition, pop quizzes covering either lecture material or homework material will be given unannounced. No make ups are given for quizzes, but the lowest quiz score will be dropped.

There will be two midterm exams, each weighted equally. No exam score will be dropped. No exam score will be replaced with the final exam score. No make-up exams will be given without *PRIOR* consent from the instructor. You may make up only one exam and that only for a serious and compelling reason. A conflict with another class's exam schedule is not sufficient. You will be given a three day grace period in which you may make up your exam.

Photo ID is required by all students at every exam.

No questions are allowed on the day of an exam regarding exam material. This does not apply to quizzes, just exams and the final. Any other type of questions on exam day are, of course, fine.

To challenge the grading of an assignment, you may submit an appeal in writing only stating the reason you feel your work was graded incorrectly. The appeal and the original assignment may be handed in during the next class period. All decisions regarding appeals are final; no second appeals are allowed.

To pass the class you *must* take the final exam (in both lab and lecture) and both midterms.

A grade of zero points will be assigned to any work done if a student has been found cheating.

An "incomplete" will only be assigned as a final course grade when a *serious* illness or some other severe problem is encountered by the student.

It is the responsibility of the student, not the instructor, to ensure being dropped or withdrawn from the course.

To receive your final grade you may send an e-mail request or give me a self-addressed stamped envelope at the end of the quarter. No grades will be posted.

Homework solutions will be discussed in office hours and lecture. Some solutions will be posted on the web site AFTER the due date.

You will be graded on the *union* of the information provided in the lecture and from the assigned text readings. The grades will be given on the following percentages:

A: 92-100%  
A-: 90 -91%  
B+: 88 -89%  
B: 82-87%  
B-: 80 -81%  
C+: 78-79%  
C: 60 -77%  
D: 50-59%  
F: Lower than 50%

The grade distribution is as follows:

Lab 10%  
Homework/Quizzes 10%  
Exams (2 exams) 40%  
Final (comprehensive) 40%

**Lab Attendance:** Lab attendance is mandatory. If you miss more than one unexcused lab, you may be liable for an instructor initiated drop from the entire course. You are dismissed from the lab for the day when you have the instructor's permission to leave. You may leave for a short time and then return, leaving the lab early without explicit permission from the instructor will constitute an absence.

**Student Learning Outcome(s):**

\*Critically examine new, previously un-encountered problems, analyzing and evaluating their constituent parts, to construct and explain a logical solution utilizing, and based upon, the fundamental laws of mechanics.

\*Gain confidence in taking precise and accurate scientific measurements, with their uncertainties, and then with calculations from them, analyze their meaning as relative, in an experimental context, to the verification and support of physics theories.